

REMARKS

Petition for Extension of Time Under 37 CFR 1.136(a)

It is hereby requested that the term to respond to the Examiner's Action of May 7, 2007 be extended three months, from August 7, 2007 to November 7, 2007.

Authorization to charge a Credit Card is given to cover the extension fee. The Commissioner is hereby authorized to charge any additional fees associated with this communication to Deposit Account No. 19-5425.

In the Office Action, the Examiner indicated that claims 1 through 43 are pending in the application and the Examiner rejected all claims.

The §112 Rejections

On page 2 of the Office Action, the Examiner has rejected claims 1-43 under 35 U.S.C. §112, second paragraph, as being indefinite. In particular, the Examiner has indicated that claims 1 and 43 are not clear for the multiple reasons. By this amendment, Applicant has significantly amended claim 1 and slightly amended claim 43 and it is believed that the objections set forth by the Examiner have been overcome by these amendments.

The Examiner also is unclear as to what the purpose of designing a processor with a new instruction set architecture (ISA) is when there is already one available for the executable code, and how the new ISA is different from the existing one, and what the advantage of having the new microprocessor is. Applicant submits that this issue raised by the examiner is not a 35 U.S.C. §112 issue.

Applicant submits that by this amendment, the claims are now in compliance with 35 USC §112, second paragraph. Applicant therefore requests that this rejection be withdrawn.

Claim Rejections, 35 U.S.C. §102

On page 3 of the Office Action, the Examiner rejected claims 1 and 43 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,477,683 to Killian et al.

The Cited Prior Art Does Not Anticipate the Claimed Invention

The MPEP and case law provide the following definition of anticipation for the purposes of 35 U.S.C. §102:

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.”
MPEP §2131 citing *Verdegaal Bros. v. Union Oil Company of California*, 814 F.2d 628, 631, 2 U.S.P.Q. 2d 1051, 1053 (Fed. Cir. 1987)

The Examiner Has Not Established a *prima facie* Case of Anticipation

The processor generation tool of the application uses executable code from an existing microprocessor to determine an instruction set which optimizes execution of that application. By contrast, in the Killian approach the user must manually select the features they wish to have within the instruction set, so there is no automatic derivation of the instruction set by application analysis as is claimed. In particular, Killian, col 3, line 51, discusses "Application Specific" requirements that may be selected for inclusion in the microprocessor. This might be the

presence of a particular instruction (e.g., a multiply or divide instruction or some other optional feature). Significantly, the user must manually decide which application specific features are included. In the approach of the present claimed invention, the construction of the instruction set is achieved automatically by analyzing an existing software executable for the software application. The types of instructions and features required are determined by analysis *without user intervention* by examining the usage within that software application. In many cases the absence of a feature might have an impact on performance, and not limit overall functionality. For instance, whether a multiply instruction should be included depends on how frequently multiplies are performed in key parts of the software since the functionality can be "emulated" using a longer sequence of other instructions. Thus the claimed automatic approach of the present claimed invention differs materially from that anticipated by Killian.

As stated previously in the prior response, Applicant submits that Killian says "...uses a description of (the) *customized* processor instruction set..." (col. 6, line 53).

In Killian, this customized description is created manually for the target microprocessor to be configured:

"A user, e.g. a system designer, develops a configured instruction set architecture. That is, using the ISA definition and tools previously developed, a configurable instruction set architecture following certain ISA design goals is developed" (col. 7, lines 10 – 14).

So Killian starts the process of designing a target microprocessor by using an instruction set that has already been customized for that target microprocessor.

The present claimed invention is predicated on the idea of automatically configuring the requirements of the instruction set for the new, target microprocessor by using code previously compiled for a *an existing and different* (and probably 3rd party) microprocessor.

Killian makes no reference in the cited section, or indeed anywhere else, to configuring the ISA of a target microprocessor by reading and adapting the ISA of an existing but different microprocessor. Killian in fact requires the ISA of the target to start off already customized for that target.

Applicant submits that these amendments place independent claims 1 and 43 in condition for allowance and therefore requests that these claims, as amended, now be allowed.

Applicant submits that claims 2 - 42 each depend from, and include all the limitations of, a now allowable independent claim. Applicant therefore requests that these claims, as amended, now be allowed.

Conclusion

In view of the foregoing amendments and remarks, applicant respectfully requests entry of the amendments, favorable reconsideration of the application, withdrawal of all rejections and objections and that claims 1 - 43 be allowed at an early date and the patent allowed to issue.

Included herein is a Petition for extension of time to respond to the Examiner's Action, and authorization to charge the extension fee to a credit card. The Commissioner is hereby authorized to charge any additional fees or credit any overpayment associated with this communication to Deposit Account No. 19-5425.

Respectfully submitted

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Date

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